



### Model Exam (1)

#### Question (1)

Complete the followings:

1. ----- alloy is used in making Jewels, while the ----- alloy is used in heating coils.
2. Symbol of Sodium is -----, while of Neon is -----.
3. Density = ----- ÷ -----.
4. Matter consists of small building units called the ----- which consists of smaller building units called -----.
5. Potential energy = ----- × -----.
6. Some plants can't be distinguished into roots, stems & leaves such as -----.
7. It is possible to distinguish between table salt & sugar by their -----.

Q2. Write the scientific term:

1. A group of more similar living organism's shape that can reproduce to give birth of new fertile individuals that is able to reproduce. -----

2. Arthropods which have four pairs of jointed legs.

-----

3. The ability to do work or exerting a change. -----

4. The central core of the atom where its mass & positive charges are concentrated. -----

Question (3)

A)-Classify the following:

1. Scorpion. -----

2. Fish. -----

3. Cockroaches. -----

4. Scolopendra. -----

B)-Give reasons for:

1. Cooking pots are made up of aluminum while their handles are made up of wood or plastic.

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-----

2. The atom is electrically neutral.

-----

-----

3. The camel pad ends in a thick flat one.

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Question (4):

A)-Give one difference between the following:

1. Bean plant& wheat plant.

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2. Jelly fish& Snails.

---

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3. Banana plant& Molukhiyah plant.

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B)-Problem:

Calculate the density of a body if its mass equals 50 gm and its volume 10 cm<sup>3</sup>?

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c)-What happens if &why?

You add 200cm<sup>3</sup> of alcohol to 300cm<sup>3</sup> water in a measuring cylinder.

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**Model Exam (2)**

**Question (1)**

**A)-Choose from column(B)which suits from column (A):**

| <u>Column (A)</u> | <u>Column (B)</u>              |
|-------------------|--------------------------------|
| 1. Sloth.         | a. Lagomorphs.                 |
| 2. Hedgehog.      | b. Rodents.                    |
| 3. Scorpion.      | c. insects.                    |
| 4. Cockroach.     | d. Arachnids.                  |
| 5. Rabbit.        | e. A Teeth less mammal.        |
| 6. Rat.           | f. Has Front teeth mammal.     |
|                   | g. does not have body support. |

**B)-Complete the followings:**

1. Matter is anything that has -----&-----.
2. The molecule of water consists of two -----atoms& one -----atom.
3. The ----- are negatively charged particles of negligible mass.

Question (2):

A)-Give reasons for:

1 Hedgehogs have front teeth extending outwards

-----

2. Inert gases can't share in chemical reactions in ordinary states.

-----

3. Balloons of hydrogen& Helium rise up in the air.

-----

B)-Problem:

1. Calculate the potential energy of an object of 20 N weights is placed at 5 m height.

-----

Question (3):

Write the scientific term:

1. Arthropods which have three pairs of jointed legs.

-----

2. Energy is neither created nor destroyed but it is converted from one form into another.

(-----)

3. The simplest pure form of a substance, we couldn't decompose it into simple substance.

(-----)

4. The central core of the atom where its mass& positive charges are concentrated. (-----)

Question (4)

Write the electronic configuration of the following:

$_{11}\text{Na}$

$_{17}\text{Cl}$

$_{12}\text{Mg}$

### Model Exam 3

#### Question (1)

Choose the correct answer:

1. Cycas belongs to -----.

(brown algae - gymnosperm - mosses)

2. In car engine, the chemical energy changes into ----- energy.

(heat - electric - mechanical)

3. The bat forelimbs are modified into ----- to take the role of flying.

(paddles - long arms - wings)

4. ----- is known as the number of protons and neutrons in the nucleus of an element.

(Mass number - Density - Atomic number)

5. From the plants which reproduce by spores is ----- plant.

(vougueir - bean - pine)

6. The property of electric conductivity is a distinguishing factor between -----.

(iron and copper - iron and wood - wood and plastic)

## Question (2)

### A)-Write the scientific term:

1. It is the mass of unit volume of a substance. -----
2. The ability of some organs and tissues to do a specific function. -----
3. The main source of energy on the Earth. -----
4. Animals that have only one pair of incisors in each jaw. -----

### B)-Problem:

A ball of weight 10 N is thrown vertically up to reach 15 m height, calculate the potential energy?

### C)-Give reasons for the following:

1. Heater is put at the bottom of room.

---

---

2. Some plants pounce insects.

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### Question (3)

#### A)-Give an example for the following:

1. A plant is not distinguished into root, stem and leaves.

-----

2. A substance appears soft at room temperature.

-----

3. A substance used in making the electric wires.

-----

#### B)-What is meant by:

1. Atomic number of sodium atom = 11

-----

-----.

2. Potential energy of an object is 20 joules.

-----

-----.

#### C)-Write the electronic configuration of the following:

1.  $^{27}_{13} \text{Al}$

2.  $^{35}_{17} \text{Cl}$

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### Model Exam (4)

#### Question (1)

##### A)-Choose the correct answer:

1. The measuring unit of density is -----.

(gm/cm - gm/cm<sup>2</sup> - gm/cm<sup>3</sup>)

2. Secretion poison in some snakes is ----- adaptation.

(structural - functional - behavioral )

3. There are air chambers in the leaves of ----- plant.

(opuntia - cactus - elodea)

4. An object of mass 2 kg is moving at a speed of 4 m/s has a kinetic energy ----- joules.

(64 - 128 - 16 )

##### B)-Correct the underlined words:

1. The electric energy is converted into kinetic energy in the electric bell. -----

2. The potential energy of moving objects increases by the increase of the mass and speed of motion.  
-----

#### Question (2)

##### A)-Write the scientific term:

1. It is composed of an acidic solution with two different metals dipped in.

(-----)

2. It is a temperature at which the matter begins to change from a solid state into a liquid one. (-----)

3. The ability of some living organisms to be hidden from their enemies. (-----)

**B)-Complete the following:**

1. The attraction forces among solid molecules are -----.
2. Metallic bridges are painted from time to time in order to protect them from -----.
3. Hawks have ----- and -----, ----- beaks to tear the prey.

**Question (3)**

**Give reasons for:**

1. The upper lip of camel's mouth is forked and has strong teeth.  
-----.
2. The stems of aquatic plants are elastic.  
-----.
3. The developed countries aim to use solar energy, wind and water motion more than before.  
-----.

**Question (4)**

**A)-Problem:**

If you know that the mass of an empty glass beaker is 75 gm and its mass while containing a liquid is 135 gm if the volume of the liquid is  $100 \text{ cm}^3$ , calculate the density of the liquid?

**B)-What are the differences between:**

1. Hydrogen and Helium.  
-----.

2. Rabbit and rat.  
-----.

3. Maize and pine.  
-----.

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### Model Exam (5)

#### Question (1)

##### A)-Complete the following statements:

1. Electric wires are made up of ----- or -----.
2. An object potential energy increases when the ----- of its weight.
3. If the speed of an object motion increases into double, its kinetic energy increases into -----.
4. Energy is the ability to exert -----.
5. The cockroach belongs to ----- while the scorpion belongs to ----- and they are classified as ----- animals.
6. Sodium symbol is ----- while sulfur symbol is -----

##### B)-Give an example for each of the following:

1. An insectivorous plant. -----
2. A perished animal. -----

##### C)- Put (✓) or (x):

1. Migration of birds is a behavioral adaptation. ( )
2. Mass number is the sum of protons and electrons. ( )
3. Spider is from arachnids. ( )

#### Question (2)

##### A)-Define each of the following:

1. Law of energy conservation.

-----.

2. Density.

-----.

B)-Compare between rodents and lagomorphs.

C)-Choose the correct answer:

1. The leaves of the aquatic plants are -----.

(necked and long - neckless and small - large sized - necked and small)

2. Opuntia plant stores water in its -----.

(leaves - roots - stem - fruits)

3. In rodents, the incisors number in the lower jaw is -----

(one pair - two pairs - three pairs - none)

4. An atom third level is saturated with ----- electrons.

(two - eight -thirty two - eighteen)

5. An object potential energy is zero when the object is at the -----

(maximum height - when the object mass increases - earth's surface - when the object speed increases)

6. Silver is symbolized by -----.

(Hg - Cu - Au -Ag)

Question (3)

A)-Write the scientific term:

1. The smallest part of matter which can be existed in form and having the properties of matter. (-----)
2. The simulation of some living organisms to the natural conditions in their environment. (-----)

B)-Give reasons for:

1. A camel hump is considered a feature of its adaptation for survival in desert.

-----.

2. The bike tire gets hot once you press the brakes.

-----.

C)-(Technological applications of energy transformations have benefits and harms) explain this sentence and give examples.

-----

-----

-----.

D)-(Migration is a form of bird's adaptation) answer the following:

1. Why do some kinds of birds migrate?

-----.

2. What is the type of this adaptation?

-----.

**Revision Sheets For 1<sup>st</sup> prep.**  
**Model exam -1****Question 1:****A-Write scientific term:**

- 1- It is the temperature at which matter changes from solid state to liquid state.
- 2- Energy stored in object due to work done on it.

**B-Compare between each of the following:**

- 1- Bean plant and maize plant.

**C-Write the electronic configuration of the following:**

- 1-  $_{16}S$
- 2-  $_{7}N$

**Question 2:****A-Choose the correct answer:**

- 1- Scorpion belongs to ..... ( insects – mammals – arachnids )
- 2- Heat is transferred by conduction through .....(solids – liquids – gases)

**B-Give reason for:**

- 1- A camel's limb ends in a thick flat bad?
- 2- The freezer is put at the top of the fridge?

**C-write the chemical symbol of:**

- 1- Silver.
- 2-Sodium.

**Question 3:****A-Put ( ✓ ) or ( X ) and correct the wrong one:**

- 1- Heat is transferred in solids by conduction. ( )
- 2- The positive pole in simple cell is made of lead. ( )

**Question 4:****A-Complete the following:**

- 1- From the animals that have soft body .....and.....
- 2- The molecule of water consists of two .....atoms and one .....atom.

**B-Problem:**

When a piece of a metal of mass 92 gm is put in a graduated cylinder containing 50 cm<sup>3</sup> of water, the reading of the cylinder becomes 60 cm<sup>3</sup>. Calculate the density of iron?

**C-Give example for:**

- 1- Plants reproduce by spores.

**Good luck & Have fun ☺**

## **Model exam -2**

### **Question 1:**

#### **A-Complete the following:**

- 1- ..... and ..... belongs to toothless mammals.
- 2- In photosynthesis process .....energy changes to .....energy.

#### **B-Give reason for:**

- 1- Water birds such as ducks and geese have wide indented beaks.

#### **C-Write the electronic configuration of the following:**

- 1-  $_{12}Mg$                             2-  $_{19}K$

### **Question 2:**

#### **A-Correct the underlined words:**

- 1- The ability of some living organisms to hide from enemies is hibernation.
- 2- Kinetic energy stored in the object due to work done on it.

#### **B-Problem:** Calculate the potential energy of an object of 25 N weight is placed at 6m height.

#### **C-What will happen:**

- 1- Hawks and vultures have not sharp and strong crooked beaks.

### **Question 3:**

#### **A-Choose the correct answer:**

- 1- .....are from animals that don't have body support. (Reptiles – Snails – Jellyfish)
- 2- The 2<sup>nd</sup> energy level is saturated by .....electrons. ( 2 - 8 - 18 )
- 3- Heat is transferred by radiation through .....(liquids – gases – metals)

#### **B-Compare between:** Insects and arachnids according to number of legs.

#### **C-Mention one example :**

- 1- Insectivorous plants.

### **Question 4:**

#### **A-Write scientific term:**

- 1- Energy is neither created nor destroyed, but it is converted from one form to another.
- 2- The sum of potential and kinetic energies of the body.

**B-Mention one use of:**

- 1- Copper-gold alloy

**C-Problem:** The mass of empty beaker = 60 gm and the mass of the beaker filled with a liquid = 140 gm while the volume of the liquid = 100 gm. Find the density of the liquid?

**Good luck & Have fun ☺**

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### **Model exam -3-**

**Question 1:**

**A-Give reason for:**

- 1- Handles of cooking pots are made of wood.
- 2- Spider is not from insects.

**B-Mention the energy transformation in each of the following:**

- 1- Electric heater.

**C-Write the electronic configuration of the following:**

- 1- <sub>2</sub>He                                    2- <sub>8</sub>O

**Question 2:**

**A-Complete the following:**

- 1- ..... is from plants that reproduce by spores.
- 2- Measuring unit of force is ..... while the unit of work is .....

**B-What happen when:**

- 1- Metallic spare parts of car are not covered with grease?

**C-Problem:** Calculate the kinetic energy of an object its mass (2kg) and its speed =5 m/s.

**Question 3:**

**A-Choose the correct answer:**

- 1- Vougeir and adiantum reproduce by .....(seeds – roots – spores )
- 2- From the teethless mammals ..... ( lion - sloth - rabbit )
- 3- The heat of the sun reaches to the Earth by ....(conduction – convection – radiation )

**B-What is the function of:**

- 1- Long arm of monkey.

**C-Find** the weight of an object of potential energy 50 joule when found at height of 5m.

**Question 4:**

**A-Write the scientific term:**

- 1- It is the amount of energy lost or gained by an electron when it transfers from one energy level to another.
- 2- The simplest state of matter which can't be decomposed into simpler one by chemical methods.

**B-Write the symbols of the following elements:**

- 1- Hydrogen      2-potassium.

**Good luck & Have fun ☺**

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**Model exam -4-**

**Question 1:**

**A-Correct the underlined word:**

- 1- Liquids have a fixed shape.
- 2- Insectivorous plants catch insects to get starch.
- 3- Secretion poison in snakes is considered as a behavioral adaptation.

**B-Give reason for:**

- 1- The shallow water birds have long and thin beaks.
- 2- Heater is placed on the ground?

**Question 2:**

**A-Choose the correct answer:**

- 1- .....bird migrate in winter. ( Hawk - Quail - Ostrich )
- 2- An example of animals with internal support .....(octopus – snail – shark )
- 3- On doubling the height , the potential energy is .....(constant – doubled – decreased)

**B-Mention one use:**

- 1- Simple electric cell.
- 2- Paddles of whales.

**C-Write the electronic configuration of the following and conclude their activities.**

- 1-  ${}_{\text{5}}\text{N}$       2-  ${}_{\text{10}}\text{Ne}$

**Question 3:**

**A-Write scientific term:**

- 1- The basic classification unit for living organisms.
- 2- A form of energy transfer from higher to lower temperature.
- 3- The temperature at which the substance changes from liquid to gaseous state.

**B-What happen in the following cases and why:**

- 1- Rubbing your hands together.

**C-Problem:** A racing bike moves with speed of 30 m/s. Calculate its kinetic energy if the mass of the bike is 10 kg.

**Question 4:**

**A-Complete the following:**

- 1- Some animals have no body support such as .....
- 2- The nucleus of the atom contains ..... and .....
- 3- Plants reproduce by formation of seeds divided into ..... and .....

**B-Mention one example for:**

- 1- A permanent source of energy
- 2- Lagomorphs.

**C-Compare between:**

- 1- Electric fan and electric iron (according to energy transformation)

**Good luck & Have fun ☺**

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**Model exam -5-**

**Question 1:**

**A-Put ( ✓ ) or ( X ) and correct the wrong:**

- 1- Fishes are from animals that have an internal support. ( )
- 2- Kinetic energy changes to heat energy by friction. ( )
- 3- Iron rusts when exposed to dry air. ( )

**B-What happens when:**

- 1- Putting drop of ink in water?

**Question 2:**

**A-Complete:**

- 1- The pine plant produce seeds inside .....
- 2- Heat is transferred from sun to Earth by .....
- 3- The mass of atom is concentrated in the .....

**B-Give reason for:**

- 1- Camel's limbs end in a thick flat bad.

**Question 3:**

**A-Write scientific term:**

- 1- The smallest part of matter that can exist freely and keeps the properties of matter.
- 2- The sum of potential and kinetic energies.

**B-Problem:**

Find the potential energy of a body at height 20 m and its mass = 4kg.  
(acceleration due to gravity is  $10 \text{ m/s}^2$ )

**C-What is meant by ?**

- 1- The conservation law of energy?

**Question 4:**

**A-Choose the correct answer:**

- 1- When air is heated, its density ..... ( still constant - increases – decreases ).
- 2- The fourth energy level is saturated with ....electrons. ( 32 - 20 - 18 )

**B-Write the electronic configuration:**

- 1-  ${}_{\text{3}}\text{Li}$                           2-  ${}_{\text{11}}\text{Na}$

**Good luck & Have fun ☺**

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**Choose the correct answer.**

1- In solar heater solar energy is converted into .....energy.

- a. light
- b. electric
- c. thermal
- d. kinetic

2- Mercury molecule consists of .....

- a. one atom
- b. two atoms
- c. three atoms
- d. four atoms

3- From the solid substances which become soft by heating is .....

- a. rubber
- b. metals
- c. sulphur
- d. wood

4- The symbol of silver element is.....

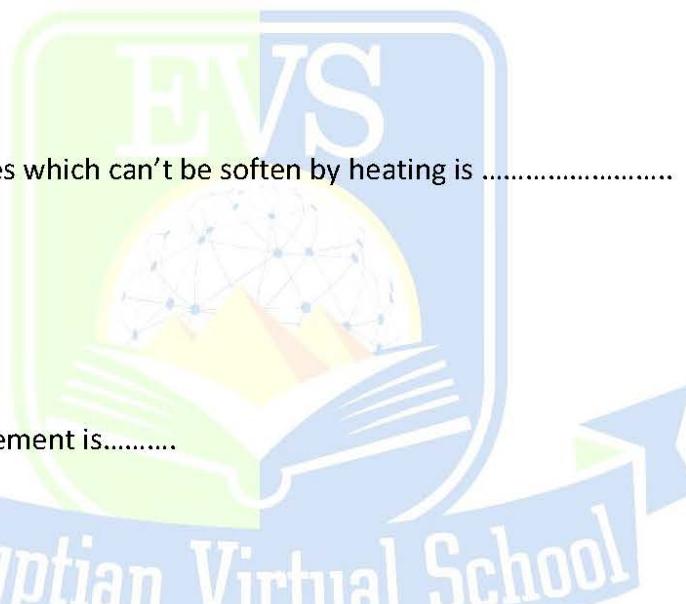
- a. Au
- b. Cu
- c. Ag
- d. Hg

5- An atom third level is saturated with..... electrons.

- a. 32
- b. 18
- c. 8
- d. 2

6- Mercury molecule consists of .....

- a. one atom
- b. two atoms
- c. three atoms
- d. four atoms



7- From the solid substances which can't be soften by heating is .....

- a. rubber
- b. metals
- c. sulphur
- d. wood

8- The symbol of copper element is.....

- a. Au
- b. Cu
- c. Ag
- d. Hg

9- The example of living organisms that undergoes hibernation is the .....

- a. desert snail
- b. jerboa
- c. frog
- d. all the previous

10- .....are from the animals which don't have a body support.

- a . Reptiles
- b. Snails
- c. Jellyfishes
- d. Birds

11- The number of front fingers in the hawks is .....

- a. 1
- b. 2
- c. 3
- d. 4

12-..... is an example of plants that reproduce by spores.

- a. Pine
- b. Bean
- c. Wheat
- d. Voughair

13- An object of 40 Newton weight and it is placed at a height of 4 meters, so its potential energy is ..... joules.

- a. 44
- b. 16
- c. 160
- d. 1600

14- Potential energy equals .....

- a. weight x height
- b. mass x height
- c. mass / height

15- The heat is transferred through .....matters by conduction.

- a. solid
- b. liquid
- c. gas

16- We can distinguish by testing between .....

- a. iron and copper
- b. milk and honey
- c. copper and wood.
- d. gold and copper.

17- The sum of protons and neutrons numbers inside the nucleus of the element is called.....

- a. atomic number
- b. atomic group
- c. mass number
- d. energy levels.

**Complete the following sentences:**

1. Matter consists of small building units called..... which consists of smaller building units called.....
2. Density is the ..... of unit volume of substance and its measuring unit is .....
3. The liquid element which its molecules composed of one atom is .....and the liquid element which its molecule composed of two atoms is .....
4. From an example of plants that reproduce by formation of spores is .....
5. From an example of insectivorous are ..... and .....
6. Heat is transferred from a .....body temperature to a .....body temperature.
7. The electric generator changes.....energy into .....energy.
8. ....and ..... belong to toothless mammals.
9. The negative pole in the simple electric cell is ..... rod and the positive pole is .....rod.
10. The symbol of Calcium element is .....while the symbol of silver element is .....
11. The mechanical energy equals the sum of .....energy and .....energy.
12. The ..... Matter takes the shape of its container while the .....matter has no specific shape.
13. The bat front limbs are modified into .....where they are modified in the whale into .....
14. The cockroach belongs to .....whereas the scorpion belongs to .....
15. From the monocotyledon plants .....while .....from dicotyledon plants.
16. From kinds of adaptation: structural, .....and .....

**Put right (✓) or wrong (✗) in the front of the following sentences:**

1. Aluminum and copper are good heat conductors. ( )
2. A piece of wood floats in water surface while a piece of lead sinks. ( )
3. The solid substances keep their shape whatever the container shape differs, while the liquid takes the shape of its container. ( )

4. The motion of the molecules of gas is relatively free. ( )
5. When mixing an amount of ethyl alcohol to amount of water so the volume of mixture is greater than their volume together. ( )
6. The motion of molecules of gas is limited. ( )
7. The chemical symbol of sodium element is Ne. ( )
8. The temperature at which substance changes from the solid state into the liquid state. ( )
9. Friction turns heat energy into mechanical energy. ( )
10. Potential energy decreases by the increase of height at which the object reaches. ( )
11. Potential energy = mass x velocity ( )
12. The motion of the gas is relatively free. ( )
13. Aluminum and copper are good heat conductors. ( )
14. Kinetic energy = mass x speed ( )
15. The wheat plant is considered from the dicotyledon plants. ( )
16. Bird's emigration is a kind of behavioural adaptation ( )
17. The front limbs had modified in the whales to paddles for swimming. ( )
18. The cold air rises up while the hot air falls down. ( )

**Write the scientific term:**

1. The mass of unit volume of the substance. ( )
2. The temperature at which substance changes from the solid state into the liquid state. ( )
3. Elements that don't share in chemical reactions in normal conditions due to the completeness of their outer energy level with electrons. ( )
4. Spaces that found among the molecules of matter. ( )
5. Smallest particle of matter which can be freely existed and has the characteristics of its substance. ( )
6. A set of similar living organisms in their shape and can get intermated together to produce fertile individuals. ( )
7. The stored energy in an object due to the work done on it. ( )
8. Energy can't be created nor destroyed but change from one form to another. ( )
9. A modification in behavior, structure or function of a living organism to become more adapted with environment. ( )
10. The stored energy in the object due to the work done on it. ( )
11. The basic unit of classification of the living organisms. ( )
12. The ability to do work or make a change. ( )

13. It is the heat condition which states the direction of heat energy whether from or to the object when it comes in contact with another. ( )
14. Autotrophic plants pounce insects to have proteins. ( )
15. Self- feeding plants pounce and predate insects to obtain proteins. ( )
16. The ability of some living organisms to simulate the dominant environmental conditions. ( )

**Give reasons for each of the following:**

1-Lubricating mechanical parts of the cars.

.....

2- Water is not used to put off petrol fires.

.....

3- Neon atom ( $^{20}_{10}Ne$ ) does not take part in chemical reaction in the ordinary conditions.

.....

4- Some plants pounce and digest insects.

.....

5- The volume of a mixture of water and alcohol is less than the sum of their volumes before being mixed together.

.....

6- The heater is placed down on the ground.

.....

7- The atom is electrically neutral.

.....

8- Camel legs are broad pad legs.

.....

9-Painting metallic bridges and the holders of light bulbs in streets from time to time.

.....

**Problems:**

1. On determining iron density using a piece of iron mass 78 gm. We immerse it in 100 cm<sup>3</sup> of water, the water increases up to 110cm<sup>3</sup>. Calculate the iron density.

.....

.....

2. On finding a liquid density through an experiment, the following results were recorded; mass of an empty beaker = 75 gm., mass of the beaker containing liquid = 135gm, volume of the liquid measured by a graduated cylinder = 100 cm<sup>3</sup>, calculate the density of liquid.

.....  
.....

3. Calculate the potential energy of an object its 5kg and on a height 10 m from earth's surface (the earth gravity force is 10 m/ sec<sup>2</sup>)

.....  
.....

### **Correct the underline words:**

1. The heat of the sun transfers to the Earth by convection and conduction.
2. When mixing an amount of ethyl alcohol to amount of water so the volume of the mixture is greater than their volume together.
3. Wheat is considered from the dicotyledon plants.
4. The chemical symbol of sodium is Ne.

### **State the difference between each of the following:**

1- The electron and the proton.

2- Rodents and lagomorphs.

3- Insects and arachnids.

### **Variant questions:**

- 1- If you knew that the symbol of Aluminium is  $^{27}_{13}Al$ .
- a. Write the electronic configuration of the element.
  - b. Calculate the number of neutron.
  - c. Is it chemically active or inactive element?

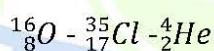
2. The chemical symbol of sodium atom  $^{23}_{11}Na$

- Write the electronic configuration for this element.
- Mention its atomic number.
- Calculate the number of electrons in its outer energy level.
- Determine the type of this element.

3. The chemical symbol of Neon atom  $^{20}_{10}Ne$

- Write the electronic configuration for this element.
- Calculate the number of neutrons.
- Determine the kind of this element.

4. From the following atoms:



- Indicate the number of electrons in the outer energy level of each atom.
- Calculate the number of neutrons in each atom.

5. What is the mass of a body whose kinetic energy is 48 joules and its velocity is 4m/sec.?

**Mention one example of the following:**

- A noble gas
- A dicotyledon plant.

**Question No (1) (14 marks).****(A) Complete the following:**

- 1- The symbol of Aluminum is ..... , while the symbol of Copper is .....
- 2- In the simple cell ..... energy is converted into.. ..... energy.
- 3- Some solutions are bad conductors of electricity as....., while others are good conductors of electricity as.....
- 4-Car exhaust from the technological applications that causes..... pollution
- 5-The nitrogen molecule consists of..... atom(s) , while the argon molecule consists of..... atom(s).

**(B) Give one example showing each of the following:**

- 1- Teethless mammals.
- 2- Diatomic liquid element.
- 3- Gymnosperms.
- 4- Poor active metals.
- 5-A device used to change the solar energy to electric energy.

**Question No (2) (14 marks).****(A) Put (✓) in front of the correct statement and (✗) in front of the false one and correct the false one:**

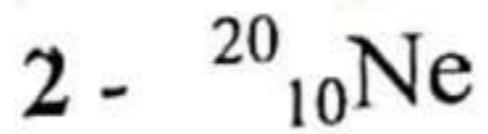
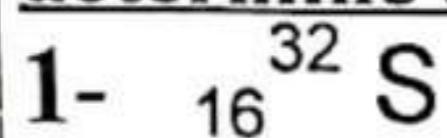
- 1- The motion of gaseous molecules are limited ( )
- 2- The potential energy of an object is decrease by increasing its height. ( )
- 3- Neutrons are positively charged . ( )
- 4- Bird migration from functional adaptation . ( )
- 5- Friction turns the mechanical energy in to heat energy . ( )

**(B) Problems :**

- 1- An object has a kinetic energy =64 joule and is moving at a speed of 4 m/s find the object mass .
- 2- Calculate the density of a piece of iron its mass = 40 gm and its volume = $5\text{cm}^3$ .

**Question No (3): (14 marks).**

(A) Write the electronic configuration of the following atoms then determine each of:



- a- The number of electrons in the outer level.
  - b- The mass and atomic number of each atom.

**(B) Write the scientific term:**

- 1-The energy stored in an object due to work done on it. (.....)

2-The amount of energy that the electron gained or lost to transfer from an energy level to another. (.....)

3- Organisms that cannot be seen by the naked eye and they are spread in air, water and soil. (.....)

4-The transfer of heat through solid objects from part to another. (.....)

**Question No (4) (14 marks).**

**(A) Choose the correct answer:**

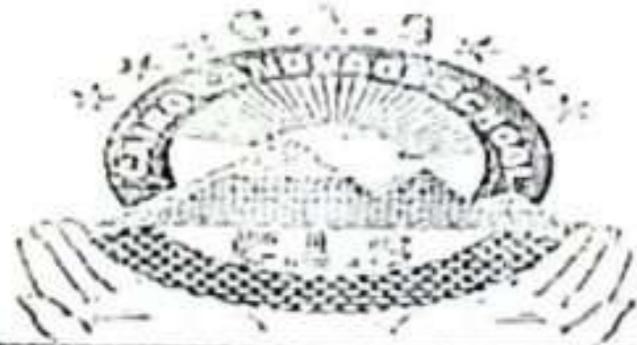


**(B) Give the reasons:**

- 1-Fuel in a car as food for a man
  - 2-Hedgehog has front teeth extending outwards.
  - 3-The equation  $2n^2$  is not applied to levels higher than the 4<sup>th</sup> level.

### **(C) What happens when:**

- 1- A ball. is raised upwards ,then it is left to fall downwards.  
2-Leaving a piece of iron exposed to moist air for a period of time.

**Question No (1) (14 marks).****(A) Complete the following:**

- ✓ 1- The symbol of Silver is ... , while the symbol of Sulfur is.....
- ✓ 2- In the solar oven ..... energy is converted into ..... energy.
- 3- ..... is an example of camouflage in insects.
- ✓ 4- The net works of wireless transmitters of cellular phone cause ..... pollution, while loud speakers cause ..... pollution.
- ✓ 5- An alloy of ..... is used in making of jewels ,while an alloy of ..... is used in making of heater coils.

**(B) Cross out the unsuitable word then classify the remaining group:**

- |                |                     |           |               |
|----------------|---------------------|-----------|---------------|
| ✓ 1- ( Bean    | - Pea               | - Corn    | - Pine )      |
| ✓ 2- ( Water   | - Hydrogen chloride | - Ammonia | - Oxygen )    |
| ✓ 3- ( Locust  | - Mosquito          | - Spider  | - Flies )     |
| ✓ 4- ( Wood    | - Iron              | - Oil     | - Cork )      |
| ✓ 5- ( Dorsera | - Dieonea           | - Algae   | - Halophila ) |

**Question No (2) (14 marks).****(A) Put (✓) in front of the correct statement and (✗) in front of the false one and correct the false one:**

- ✓ 1- The attraction forces among molecules of solids are very small. (✗ )
- ✓ 2- The dynamo converts the mechanical energy in to electric energy. ( )
- ✓ 3- Iron rusts when exposed to dry air . ( )

- ✓ The bird activity during the day and the bat during night is from functional adaptation. ( )

- 5-Heat transfers through solids by convection . ( )

### (B) Problems :

- Q1- Calculate the potential energy of an object its mass = 3 kg placed at 5 m height from the ground.( consider gravity acceleration = $10 \text{ m/s}^2$  ).

- Q2- Calculate the density of a piece of iron its mass = 88 gm and its volume = $10\text{cm}^3$

**Question No (3): (14 marks).**

(A) Write the electronic configuration of the following atoms then determine each of :

1-  $^{23}_{11}$  Na

2 -  $^4_2\text{He}$

- a- The number of neutrons in each atom.
  - b- The mass and atomic number of each atom.

(B) What is meant by:

- Mechanical energy of an object = 50 joule.

- ~~2~~-The melting point of ice = zero ° C.

- ## B - Micro - organisms.

- ~~4-Law of energy conservation.~~

### **Question No (4) (14 marks).**

**(A) Choose the correct answer:**

- The energy level ( L ) is saturated by ..... electrons.

- a) 2                    b) 8                    c) 18                    d) 32

- ~~b~~- The number of incisors in the upper jaw of jerboa is.....

- a) One pairs      b) Two pairs      c) Three pairs      d) Four pairs

- Q- The smallest particle that can share in the chemical reaction is.....

- a) Element      b) Atom      c) Molecule      d) Compound

4- From the example of hibernation in amphibians is.....

- a) frog                    b) Quail                    c) Desert snails                    d) Rabbit

5- Some solids are soft at ordinary temperature as .....

- a) Rubber                b) Gold                    c) Coal                            d) Iron

6-Electric energy is converted into kinetic energy in.....

- a) Electric lamp            b) Cellular phone            c) Sewing machine            d) Radio

**(B) Give the reasons:**

1-The freezer is found at the top of fridge.

2-It is impossible for cat to mate to rabbit.

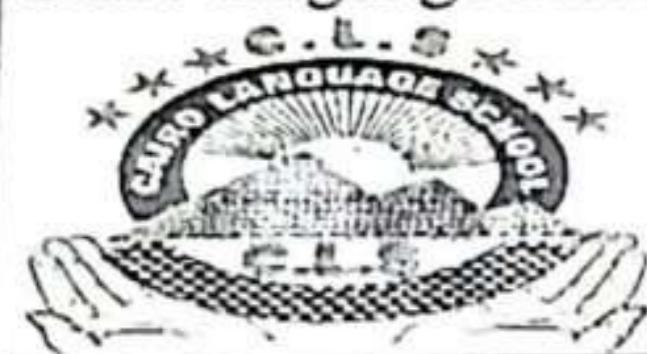
3-When you leave the perfume bottle opened you smell it all over the room.

**(C) What happens when:**

1- Camel exchanges its pad with the horse hoof.

2-The energy of the electron is greater than the energy level where the electron rotate in.

*With best wishes*



## First Term Exam

2017-2018

**Question (1)****A. Choose the correct one:-**

- 1) Heat is transferred through solids by.....  
 (a) Conduction & convection      (c) radiation  
 (b) conduction only      (d) convection & radiation
- 2) Scorpion belongs to .....  
 (a) Insects      (b) arachnids      (c) myriapods      (d) mammals
- 3) .....from the environmental changes that leads to adaptation.  
 (a) Climate changes      (c) food diversity  
 (b) Existence of water      (d) All the previous answers
- 4) .....is among rodents that undergo aestivation.  
 (a) Rat      (b) Squirrel      (c) Jerboa      (d) Desert snail
- 5) The sum of the numbers of protons and neutrons in the nucleus of the atom is known as.....  
 (a) Atomic number.      (b) Mass number.      (c) Valency.      (d) density

**B. Write the symbols of the following elements :-**

(Sodium - Nitrogen - Aluminum )

**C. Write the scientific term:**

- 1) It is the amount of energy gained or lost for the electron to transfer from one energy level to another. (.....)
- 2) The temperature at which a substance changes from a liquid state in to gaseous state. (.....)
- 3) The modification of living organism's behavior, body structure or even the biological functions of its organs to become more adapted to the environmental conditions where it lives in. (.....)

**D. What is meant by:-**

- 1) Density of water is 1 gm/cm<sup>3</sup>.
- 2) Potential energy of an object is 50 joule.

Question (2):-

A. Choose from column (B) what suits it in column (A):

| (A)                       | (B)                                   |
|---------------------------|---------------------------------------|
| Technological application | Changes of energy in it.              |
| 1. Solar heater           | a. Chemical energy into heat energy.  |
| 2. Electric heater        | b. Solar energy into heat energy.     |
| 3. Solar cell             | c. Heat energy into Chemical energy.  |
| 4. Gas stove              | d. Solar energy into electric energy. |
|                           | e. Electric energy into heat energy.  |

1- ( )      2- ( )      3- ( )      4- ( )

B. Problem:-

What is the weight of a body, whose potential energy is 88 joules and it is at a height of 11m.

C. Cross out the unsuitable word in each of the group below:-

- 1) Lion – Tiger – Dog – Wolf – Armadillo
- 2) Neon – Argon – Oxygen – Xenon.
- 3) Convection – radiation – friction – conduction.

D. Classify the following forms of adaptation into structural ,functional and behavioural adaptation:-

- 1) The modification of the frog limbs to swim on the water surface.
- 2) Secreting saliva on watching good food.
- 3) Migration of salmon fish at specific times of the year.

Question (3):-

A. Put ( ✓ ) or ( ✗ ) and correct the wrong one :-

- 1) The seeds of gymnosperms are formed inside a pericarp. ( )
- 2) By rubbing your hands together, heat energy is produced. ( )
- 3) In the simple cell, the electric current passes through the wire from copper plate to zinc plate. ( )
- 4) If mating occurs between a dog and a cat, it produces new fertile individuals. ( )
- 5) The bones of front limbs in bats are elongated to help them climb trees. ( )

E. Problem:-

Calculate the mass of a piece of sulphur, whose volume is  $5\text{cm}^3$ , knowing that the density of sulphur is  $2.1 \text{ gm/cm}^3$ .

F. Give reason:-

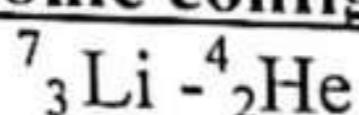
- 1) The freezer is found at the top of the fridge.
- 2) The front teeth of hedgehog are extending outwards.

Question (4) :-

A. Complete:-

- 1) Substances of densities less than the water density.....on water surface, while other substances of densities more than that of water.....
- 2) An alloy of.....is used in making jewels while an alloy of.....is used in making heating coils.
- 3) .....and.....belong to toothless mammals.
- 4) Active elements should have .....than 8 electrons in their outermost energy levels, so they can react chemically with another atom to produce a molecule in a.....state.
- 5) Horses' limbs end in.....to run over rocky soil, whereas camels' limbs end in.....to walk on hot sandy soil.

B. Write the electronic configuration of the following elements ,then:



- a) Find the number of electrons in the outermost energy level in each atom.
- b) Find mass number & atomic number in each atom.
- c) Calculate the number of neutrons in each atom.

C. Give an example of each of the following:-

1. A very active metal. (.....)
2. A plant carries large-sized leaves. (.....)

Question No (1) (14 marks).(A) Complete the following:

- 1- The symbol of Aluminum is ..... **Al** ..... , while the symbol of Copper is ... **Cu** .....
- 2- In the simple cell ..... **chemical** ..... energy is converted into.. **electric** ..... energy.
- 3- Some solutions are bad conductors of electricity as.....**sugary solution** ....., while others are good conductors of electricity as... **salt solutions**
- 4-Car exhaust from the technological applications that causes.. **chemical** pollution
- 5-The nitrogen molecule consists of..... **two** atom(s) , while the argon molecule consists of..... **one** ..... atom(s).

(B) Give one example showing each of the following:

- 1- Teethless mammals. **sloth**
- 2- Diatomic liquid element. **bromine**
- 3- Gymnosperms. **cycas**
- 4- Poor active metals. **gold**
- 5-A device used to change the solar energy to electric energy. **solar cell**

Question No (2) (14 marks).(A) Put (✓) in front of the correct statement and (✗) in front of the false one and correct the false one:

- 1- The motion of gaseous molecules are limited **solid** ( **✗** )
- 2- The potential energy of an object is **decrease** by increasing its height. ( **✗** )
- 3- Neutrons are positively charged **protons** ( **✗** )
- 4- Bird migration from **functional** adaptation **behavioural** ( **✗** )
- 5- Friction turns the mechanical energy in to heat energy . ( **✓** )

(B) Problems :

1- An object has a kinetic energy =64 joule and is moving at a speed of 4 m/s find the object mass .

$$m= 2KE / v^2$$

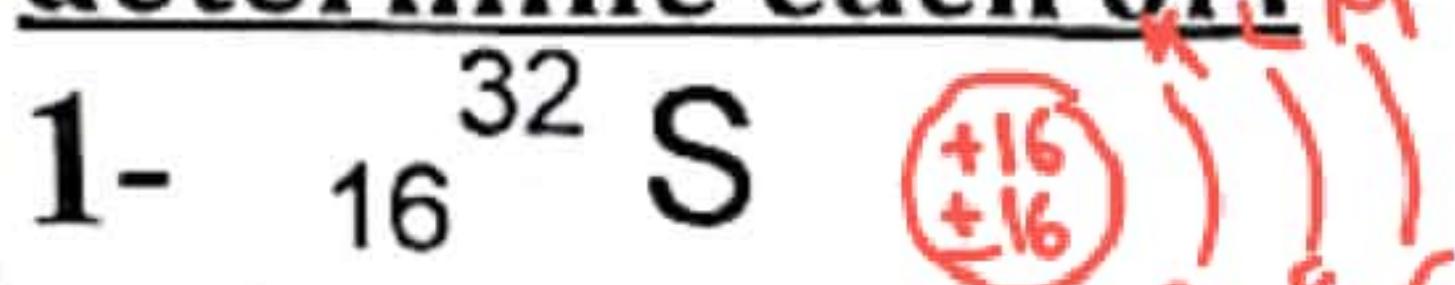
$$= 2 \times 64 / (4)^2 = 8 \text{ Kg}$$

2- Calculate the density of a piece of iron its mass = 40 gm and its volume =5cm<sup>3</sup>.

$$d=m/v= 40/5=8 \text{ gm/cm}^3$$

### Question No (3): (14 marks).

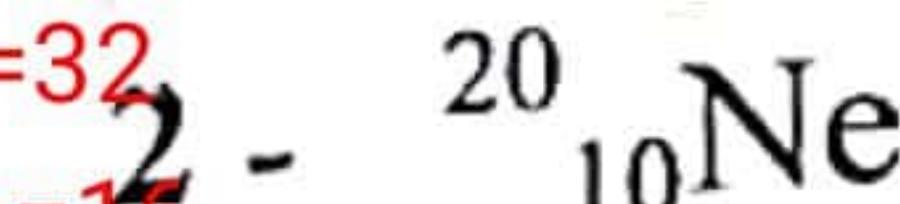
**(A) Write the electronic configuration of the following atoms then determine each of:**



electrons = 16

mass no. = 32

atomic no. = 16



electrons = 10

mass no. = 20

atomic no. = 10

- a- The number of electrons in the outer level.  
b- The mass and atomic number of each atom.

**(B) Write the scientific term:**

- 1-The energy stored in an object due to work done on it. **potential E.**  
2-The amount of energy that the electron gained or lost to transfer from an energy level to another. **(quantum)**  
3- Organisms that cannot be seen by the naked eye and they are spread in air, water and soil. **microorganisms**  
4-The transfer of heat through solid objects from part to another. **(conduction)**

### Question No (4) (14 marks).

**(A) Choose the correct answer:**

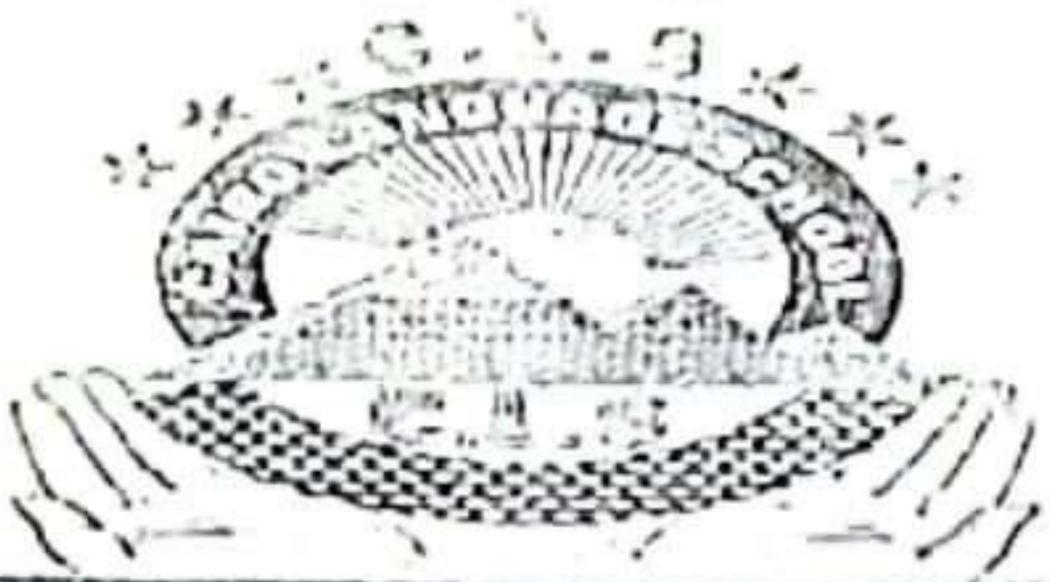
- 1- The result of combination between two or more atoms of different elements .....  
 a) Element ..... b) Compound ..... c) Molecule
- 2- From animals with internal support is.....  
 a) Snails ..... b) Fish ..... c) Jellyfish
- 3- The number of energy levels in the largest atom is.....  
 a) 3 ..... b) 4 ..... c) 7 .....
- 4- The camel pad ends in .....  
 a) Thick flat end ..... b) strong solid end ..... c) Paddles
- 5- Some solids are soft at ordinary temperature as .....  
 a) Rubber ..... b) Sodium ..... c) Coal
- 6- In the electric heaters, electric energy is converted in to ..... energy  
 a) Light ..... b) Heat ..... c) Kinetic

**(B) Give the reasons:**

- 1-Fuel in a car as food for a man  
2-Hedgehog has front teeth extending outwards.  
3-The equation  $2n^2$  is not applied to levels higher than the 4<sup>th</sup> level.

**(C) What happens when:**

- 1- A ball. is raised upwards ,then it is left to fall downwards.  
2-Leaving a piece of iron exposed to moist air for a period of time.

Question No (1) (14 marks).(A) Complete the following:

- 1- The symbol of Silver is ... **Ag** ...., while the symbol of Sulfur is ..... **S** .....
- 2- In the solar oven ..... **solar** .....energy is converted into ..... **heat** .....energy.
- 3- ..... **leaf insect** .....is an example of camouflage in insects.
- 4- The net works of wireless transmitters of cellular phone cause .....  
pollution, while loud speakers cause ..... **electromagnetic** .....pollution.
- 5-An alloy of **gold \_ copper** is used in making of jewels ,while an alloy of ..... is ..... **nickel \_ chrome**  
used in making of heater coils.

(B) Cross out the unsuitable word then classify the remaining group:

- |              |                     |           |                   |                                 |
|--------------|---------------------|-----------|-------------------|---------------------------------|
| 1- ( Bean    | - Pea               | - Corn    | - ..... Pine      | ) <b>angiosperm</b>             |
| 2- ( Water   | - Hydrogen chloride | - Ammonia | - ..... Oxygen    | ) <b>compound</b>               |
| 3- ( Locust  | - Mosquito          | - Spider  | - ..... Flies     | ) <b>insects</b>                |
| 4- ( Wood    | - Iron              | - Oil     | - ..... Cork      | ) <b>float on water</b>         |
| 5- ( Dorsera | - Dieonea           | - Algae   | - ..... Halophila | )<br><b>insectivorous plant</b> |

Question No (2) (14 marks).(A) Put (✓) in front of the correct statement and (✗) in front of the false one and correct the false one:

- 1- The attraction forces among molecules of solids are very **small**. **strong** ( **✗** )
- 2- The dynamo converts the mechanical energy in to electric energy. ( **✓** )
- 3-Iron rusts when exposed to dry air . **moist** ( **✗** )

✓ The bird activity during the day and the bat during night is from functional adaptation. **behavioural** ( X )

✓ Heat transfers through solids by conduction ( X )

### (B) Problems :

1- Calculate the potential energy of an object its mass = 3 kg placed at 5 m height from the ground. ( consider gravity acceleration =  $10 \text{ m/s}^2$  ).

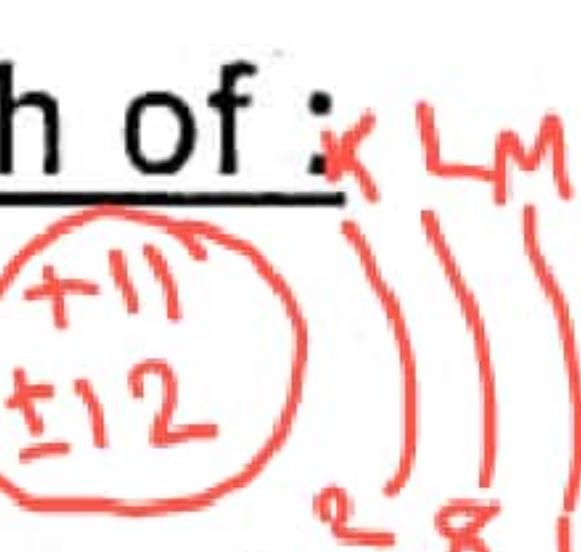
$$w = m \times g = 3 \times 10 = 30 \text{ N} \quad pE = w \times h = 30 \times 5 = 150 \text{ J}$$

2- Calculate the density of a piece of iron its mass = 88 gm and its volume =  $10 \text{ cm}^3$

$$d = m/v = 88/10 = 8.8 \text{ gm/cm}^3$$

### Question No (3): (14 marks).

#### (A) Write the electronic configuration of the following atoms then

determine each of : 

neutrons=12

1-  $^{23}_{11} \text{Na}$

mass no.= 23

atomic no.= 11

2-  $^4_2 \text{He}$



neutrons =2  
mass no.=4  
atomic no.= 2

a- The number of neutrons in each atom.

b- The mass and atomic number of each atom.

#### (B) What is meant by:

✓-Mechanical energy of an object = 50 joule.

✓-The melting point of ice = zero  $^{\circ}\text{C}$ .

✓- Micro - organisms.

✓-Law of energy conservation.

### Question No (4) (14 marks).

#### (A) Choose the correct answer:

✓ The energy level ( L ) is saturated by ..... electrons.

- a) 2 ..... b) 8 ..... c) 18 ..... d) 32

✓ The number of incisors in the upper jaw of jerboa is.....

- a) One pairs ..... b) Two pairs ..... c) Three pairs ..... d) Four pairs

✓ The smallest particle that can share in the chemical reaction is.....

- a) Element ..... b) Atom ..... c) Molecule ..... d) Compound

From the example of hibernation in amphibians is.....

- a) frog                          b) Quail                          c) Desert snails                          d) Rabbit

.....  
5- Some solids are soft at ordinary temperature as .....

- a) Rubber
  - b) Gold
  - c). Coal
  - d) Iron

.....  
6-Electric energy is converted into kinetic energy in.....

- a) Electric lamp      b) Cellular phone      c) Sewing machine    d) Radio

**(B) Give the reasons:**

1-The freezer is found at the top of fridge.

2-It is impossible for cat to mate to rabbit.

3-When you leave the perfume bottle opened you smell it all over the room.

**(C) What happens when:**

1- Camel exchanges its pad with the horse hoof.

2-The energy of the electron is greater than the energy level where the electron rotates in.

*With best wishes*



## **First Term Exam**

2017-2018

### Question (1)

**A. Choose the correct one:-**

- 1) Heat is transferred through solids by.....

(a) Conduction & convection      (c) radiation  
(b) conduction only      (d) convection & radiation

2) Scorpion belongs to .....

(a) Insects      (b) arachnids      (c) myriapods      (d) mammals

3) .....from the environmental changes that leads to adaptation.

(a) Climate changes      (c) food diversity  
(b) Existence of water      (d) All the previous answers

4) .....is among rodents that undergo aestivation.

(a) Rat      (b) Squirrel      (c) Jerboa      (d) Desert snail

5) The sum of the numbers of protons and neutrons in the nucleus of the atom is known as.....

**B. Write the symbols of the following elements :-**

(Sodium - Nitrogen - Aluminum )

C. Write the scientific term: **AI**

- QUESTION

Q. Define the following terms.

  - 1) It is the amount of energy gained or lost for the electron to transfer from one energy level to another. (**quantum**)
  - 2) The temperature at which a substance changes from a liquid state in to gaseous state. (**boiling point**)
  - 3) The modification of living organism's behavior, body structure or even the biological functions of its organs to become more adapted to the environmental conditions where it lives in. (**adaptation**)
  - D. What is meant by...

D. What is meant by:-

- 1) Density of water is  $1 \text{ gm/cm}^3$ .
  - 2) Potential energy of an object is 50 joule.

## Question (2):-

### A. Choose from column (B) what suits it in column (A):

| (A)                       | (B)                                   |
|---------------------------|---------------------------------------|
| Technological application | Changes of energy in it.              |
| 1. Solar heater           | a. Chemical energy into heat energy.  |
| 2. Electric heater        | b. Solar energy into heat energy.     |
| 3. Solar cell             | c. Heat energy into Chemical energy.  |
| 4. Gas stove              | d. Solar energy into electric energy. |
|                           | e. Electric energy into heat energy.  |

1- ( b )      2- ( e )      3- ( d )      4- ( a )

### B. Problem:-

What is the weight of a body, whose potential energy is 88 joules and it is at a height of 11m.

$$w=pE/h = 88/11 = 8 \text{ N}$$

### C. Cross out the unsuitable word in each of the group below:-

- 1) Lion –Tiger –Dog –Wolf –~~Armadillo~~  
 2) Neon –Argon –~~Oxygen~~ – Xenon.  
 3) Convection – radiation –~~friction~~ – conduction.

### D. Classify the following forms of adaptation into structural ,functional and behavioural adaptation:-

- 1) The modification of the frog limbs to swim on the water surface. **structural**  
 2) Secreting saliva on watching good food. **functional**  
 3) Migration of salmon fish at specific times of the year. **behavioural**

### Question (3):-

#### A. Put ( ✓ ) or ( x ) and correct the wrong one :-

- 1) The seeds of gymnosperms are formed inside a ~~pericarp~~. **cone** ( X )  
 2) By rubbing your hands together, heat energy is produced. ( ✓ )  
 3) In the simple cell, the electric current passes through the wire from copper plate to zinc plate. ( ✓ )  
 4) If mating occurs between a dog and a cat, it produces new fertile individuals. ( ✓ )  
 5) The bones of front limbs in ~~bats~~ are elongated to help them climb trees. ( X )

### E. Problem:-

**gorilla**

Calculate the mass of a piece of sulphur, whose volume is  $5\text{cm}^3$ , knowing that the density of sulphur is  $2.1 \text{ gm/cm}^3$ .

$$m=d \times v = 2.1 \times 5 = 10.5 \text{ gm}$$

### F. Give reason:-

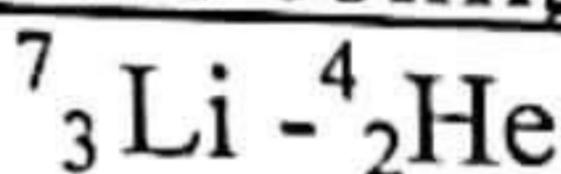
- 1) The freezer is found at the top of the fridge.  
 2) The front teeth of hedgehog are extending outwards.

#### Question (4) :-

##### A. Complete:-

- 1) Substances of densities less than the water density ..... **float** ..... on water surface, while other substances of densities more than that of water ..... **sinks** .....
- 2) An alloy of... **gold- copper** ... is used in making jewels while an alloy of **nickel \_ chrome** is used in making heating coils.
- 3) **sloth** .... and **armadillo** .. belong to toothless mammals.
- 4) Active elements should have .. **less** .. than 8 electrons in their outermost energy levels, so they can react chemically with another atom to produce a molecule in a. **stable** .state.
- 5) Horses' limbs end in **strong solid hoof** to run over rocky soil, whereas camels' limbs end in **thick flat pad** to walk on hot sandy soil.

##### B. Write the electronic configuration of the following elements ,then:



- a) Find the number of electrons in the outermost energy level in each atom.
- b) Find mass number & atomic number in each atom.
- c) Calculate the number of neutrons in each atom.

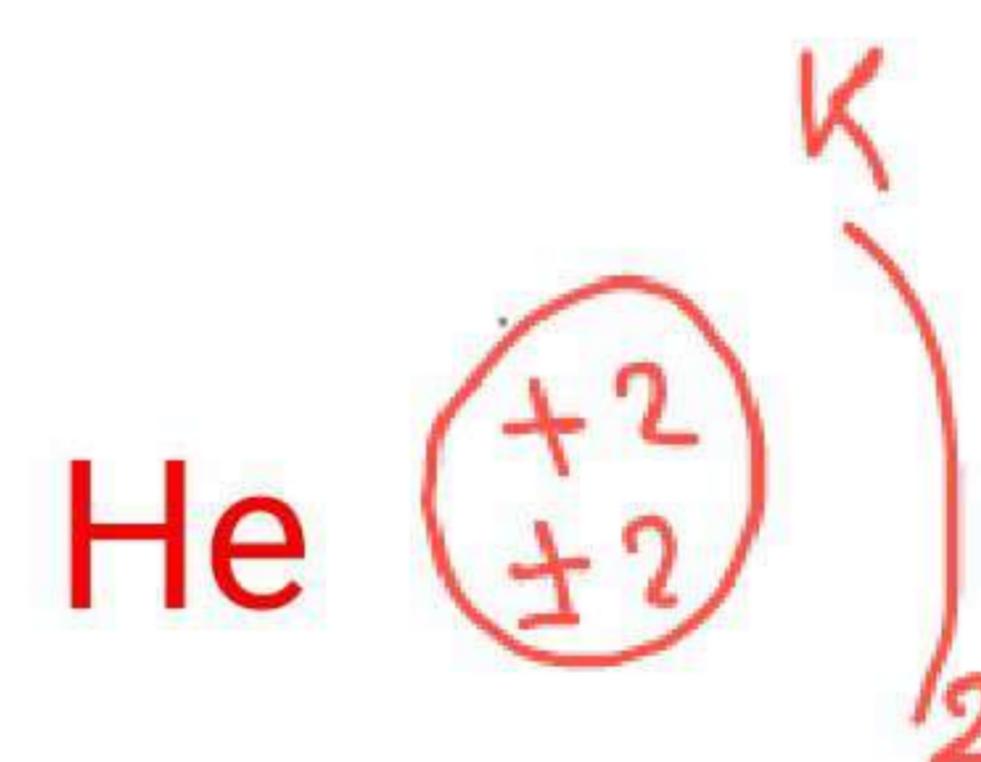
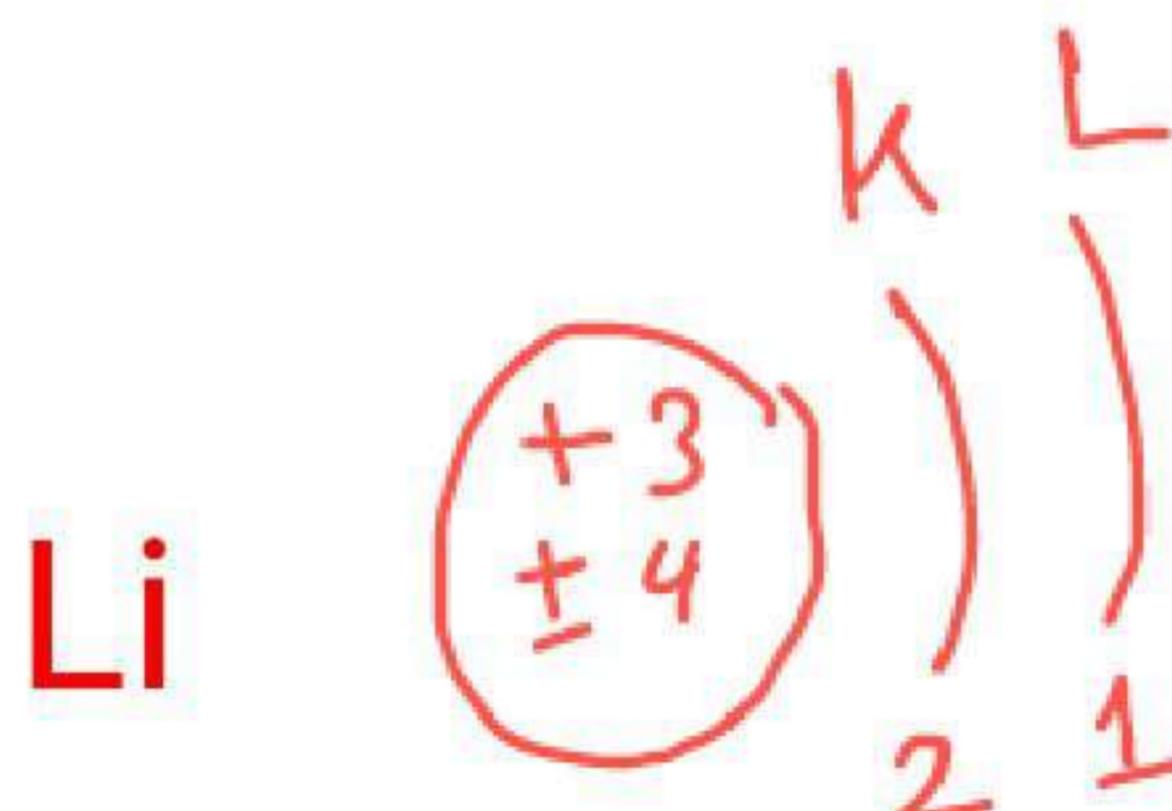
##### C. Give an example of each of the following:-

1. A very active metal.

(..... **sodium** .....

2. A plant carries large-sized leaves.

(... **banana plant** .....

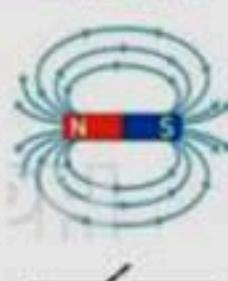
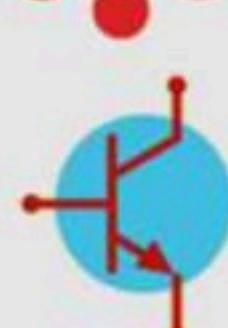
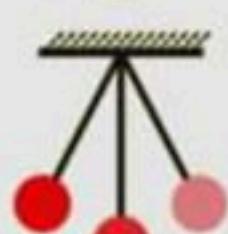
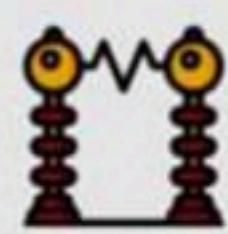


1      electrons in outermost shell      2

7      mass no,      4

3      atomic no,      2

4      neutrons no,      2



# SCIENCE

27

## Final Revision

### Test 1

#### Question one:

Complete the following statements:

1. Camel limbs end in.....while horse limbs end in.....
2. Mass number is the sum of ..... and ..... found in the nucleus of the element.
3. Potential energy increases by increasing.....and.....
4. From plants which reproduce by spores.....and from plants which produce seeds inside cones.....

#### Question Two:

A- Write the scientific term that indicates each of the following sentences:

1. Temperature at which solid state starts to change into liquid one.
2. The ability to exert work.
3. The amount of energy which an electron loses or gains to transfer from an energy level into another one.
4. The ability of some living organisms to simulate the dominant natural conditions in their environment.

B- Compare between

Element and compound

Water and ice with regarding to the intermolecular spaces.

#### Question Three:

A-Give reasons for

1. Some plants pounce and predate insects
2. Atom is electrically neutral
3. There are front teeth extending outwards in hedgehog
4. Differences between matter molecules from one another in their properties

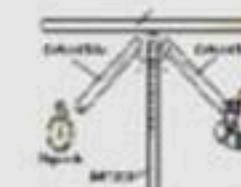
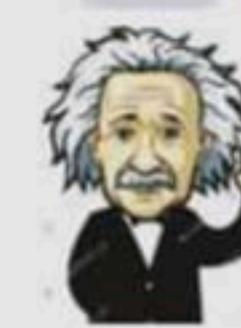
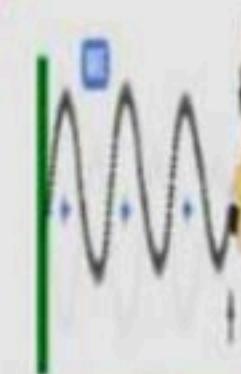
B- An element its atomic number is 11 and its mass number is 23 , illustrate the electronic configuration in the energy levels of that element.

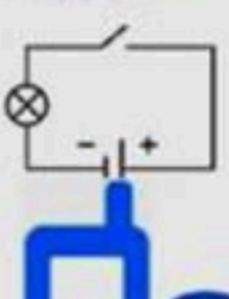
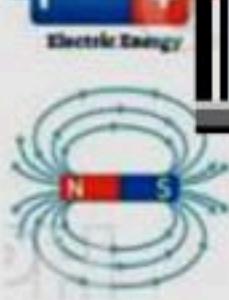
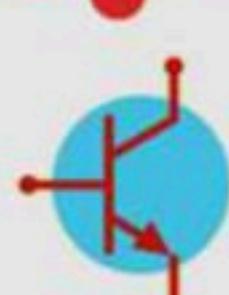
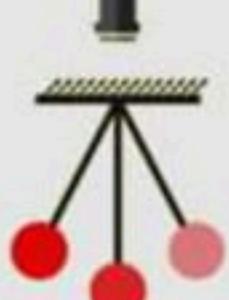
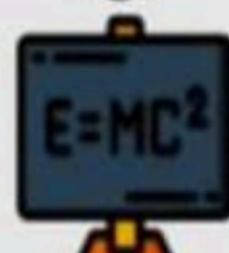
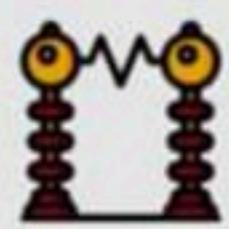
#### Question Four:

A- Rewrite the following statements after correcting the under line words:

1. Gaseous matter keeps its shape and volume whatever the container changes.
2. Bean plant is considered from monocotyledon.
3. The chemical symbol of sulphur is S

B- Find the potential energy of an object its mass is 5kg when found at a height 10 m from ground, consider gravity acceleration =  $10 \text{ m/s}^2$





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## Final Revision

### Model Answer

#### Answer Q1

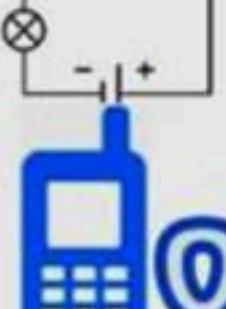
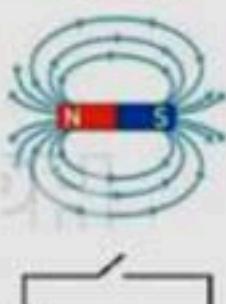
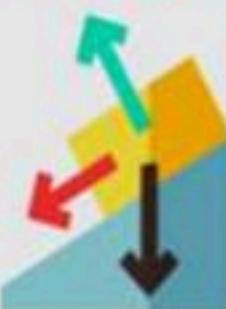
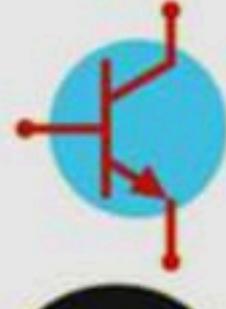
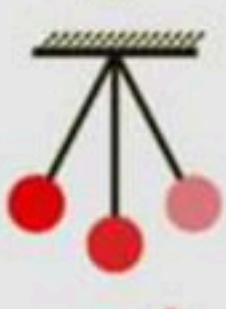
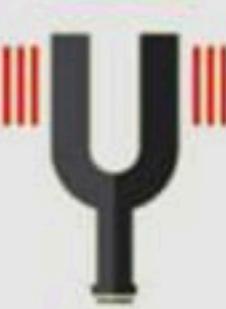
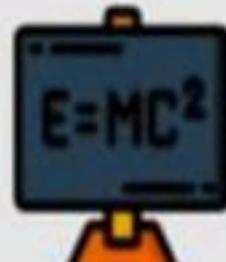
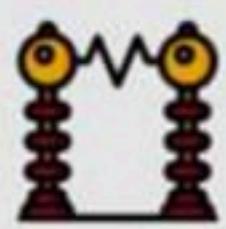
- 1- thick flat end (camel's pad) - strong solid end (horse's hoof).
- 2- protons - neutrons
- 3- weight - height
- 4- Voughier or adiantum - pine plant or cycas plant

#### Answer Q2

- A- 1- melting point      2- Energy      3- Quantum      4- Camouflage

| b- Points of comparison | Element   | Compound   |
|-------------------------|---|--|
| Definition :            | It is the simplest pure form of matter which can't be analyzed chemically into simpler form by simple chemical methods. | It is a substance which is formed from the combination of atoms of two or more different elements with constant weight ratios. |
| Atoms :                 | Similar.  | Different.   |
| Examples :              | Hydrogen, oxygen, aluminum and sulphur.   | Water, hydrogen chloride, carbon dioxide and ammonia.  |

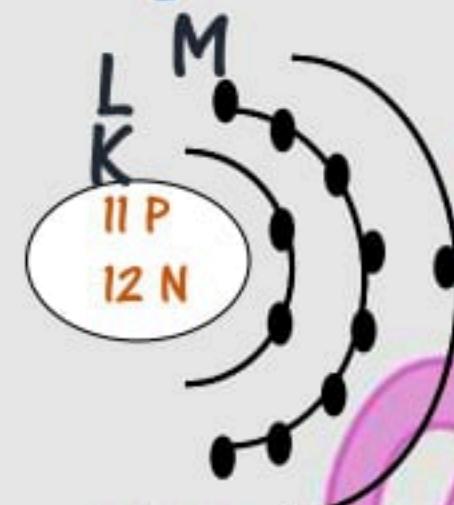
|                       | Water                           | Ice                 |
|-----------------------|---------------------------------|---------------------|
| Intermolecular spaces | Relatively large (Intermediate) | Very small (Narrow) |



### Answer Q3

- A- 1- because their roots can't absorb nitrogenous substances  
 2- Because the number of negative electrons is equal to the number of positive protons  
 3- To capture insects  
 4- The difference between molecules of matter is due to:  
 -number of atoms  
 The kind of atoms  
 The way of combination together

B-Sodium  $^{23}_{11}\text{Na}$   $\rightarrow$



### Answer Q4

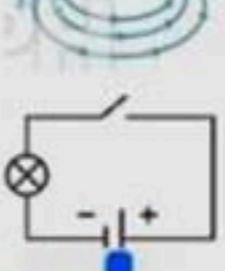
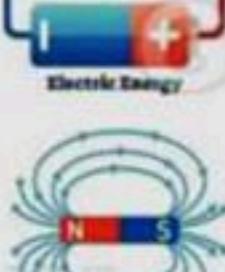
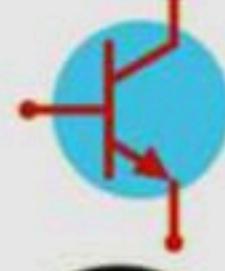
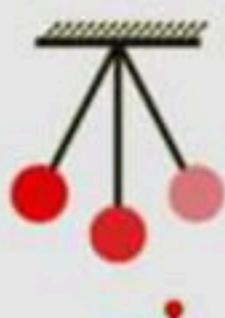
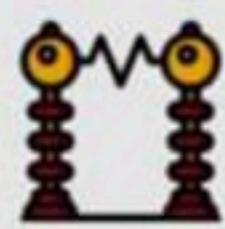
- A- 1- Solid Matter  
 2- Maize plant  
 3- S

B- Weight = mass x gravity acceleration =  $5 \times 10 = 50$  Newton

Potential energy = Weight x Height =  $50 \times 10 = 500$  Joules

Final Revision





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## Final Revision

### Test 2

#### Question one:

Complete the following statements:

- Matter is composed of small units called .....while these units are composed of smaller units called.....
- Electrons are particles with .....charges while protons are particles with..... charges .
- Hawks have ..... beaks, whereas duck's beak .....
- An alloy of ..... is used in making jewels while an alloy of ..... is used in making heaters coils.
- If the potential energy of an object is 100 Joule and its kinetic energy 50 joule ,it has mechanical energy equals..... joule.

#### Question Two:

Give reasons for:

- Atoms of some gases as of the inert gases do not react chemically
- Camel limbs ends in a flat thick pad
- Some animals undergo aestivation

B- In an experiment to determine water density, following results are recorded:

Mass of an empty glass beaker = 56 g

Mass of the beaker containing liquid = 156 g

Volume of the liquid measured by a graduated cylinder = 100 cm<sup>3</sup>

Calculate water density

#### Question Three:

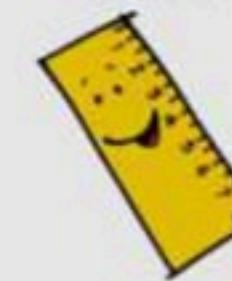
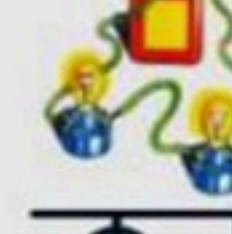
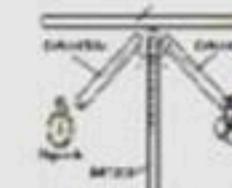
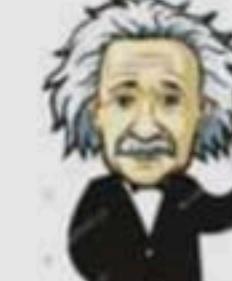
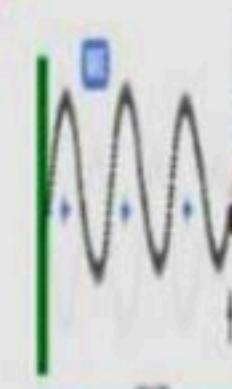
Write the scientific term for the following sentences:

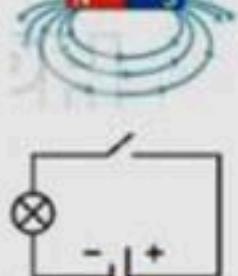
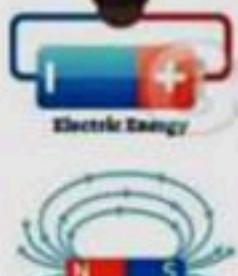
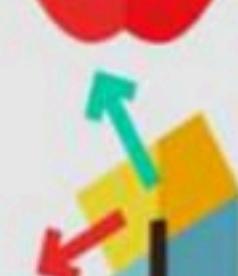
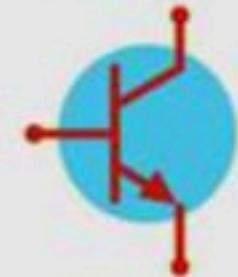
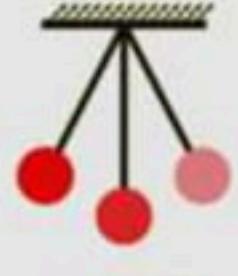
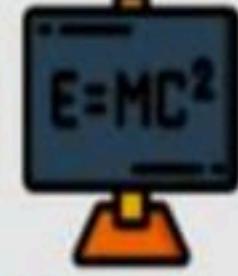
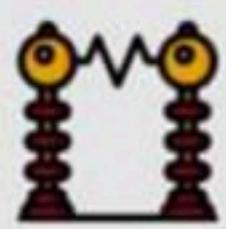
- The number of the negative charge electrons revolve around the nucleus in energy levels
- A modification in behavior, structure or the biological function of a living organisms organs become more adjustable with the environmental conditions where it lives
- Imaginary places around the nucleus in which the electrons move according to their energy.
- The product results from a combination between two or more atoms of different elements with constant ratios of mass

#### Question Four:

Put ( ✓ ) in front of the correct statement and ( ✗ ) in front of the wrong ones and correct the incorrect ones:-

- Intermolecular spaces are tiny in solids ( )
- Insectivorous plants can not absorb nitrogenous substances required to form fats ( )
- All mammals walk on four limbs ( )
- Neutrons are found inside the nucleus and carry positive charges ( )
- Opuntia plant has weak roots for no need to fix the plant in the soil ( )





### Answer Q1

- 1- molecules - atoms
- 2- negative - positive
- 3- sharp crooked - wide indented
- 4- copper and gold - nickel and chrome
- 5- 150

### Answer Q2

A- 1- because their outermost energy level is completely filled with electrons

2- To help the camel walking through hot desert sand.

$$\text{B- Mass} = 156 - 56 = 100 \text{ gm}$$

$$\text{Density} = \text{mass} / \text{volume} = 100 / 100 = 1 \text{ gm/cm}^3$$

### Answer Q3

- 1- atomic number
- 2- Adaptation
- 3- energy levels
- 4- Compound molecule

### Answer Q4

- 1- (✓)
- 2- (X) to form proteins
- 3- (X) some mammals
- 4- (X) protons
- 5- ملغي

### Model Answer

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## Final Revision

# SCIENCE

# Final Revision

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